ABSTRACT OF THE DISCLOSURE

A method, apparatus, and article of manufacture provide the ability to efficiently and effectively manage memory. A file is broken into multiple memory blocks that are managed as nodes in a heap tree. A request to access memory at a

5   linear file address is received. The linear file address is then translated to the appropriate heap block reference to complete the memory access. Additionally, a tri-linked list/tree of deallocated memory units available for use by the heap may be used. A first link points to units smaller than a current block size, a second link points to units equal to the current block size, and a third link points to units larger than the

10   current block size. When a request for memory is received, the tree is traversed to find a unit that satisfies the request and the appropriate unit in the free list is allocated.